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ABSTRACT

The Guided Independent Study Program, an individually paced, master-oriented teaching method for serving undergraduate and graduate nontraditional students at the College of St. Scholastica, Minnesota, is described. A number of independent study courses in psychology, gerontology, and education have been offered to students who cannot come to the campus to attend regular class meetings. The approach is based on psychology of learning and individual differences. The course materials are divided into 10 to 12 relatively small units of study called instructional projects. The information provided for each instructional project includes: a descriptive title, purpose, behavioral objectives, evaluative criteria, learning resources, and competency exercises. Competency exercises provide immediate feedback regarding their progress. After completing half of the course, students take a retention test before beginning the work on the second. The course grade is based on the competency exercises, assignments, and retention tests, which are administered by the student's supervisor or other representative. Students maintain contact with the instructor through phone calls and letters. The program has been found to be a viable mode of meeting educational needs of teachers, service providers, and other nontraditional students. This approach is appropriate for courses in which the material to be learned is structured in a definite hierarchy with well-defined objectives, is largely available from written materials, and is amenable to individual learning. Its features of self-pacing, mastery learning, and immediate feedback make it especially attractive to nontraditional students. (Author/SW)

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INDEPENDENT STUDY COURSES FOR NON-TRADITIONAL STUDENTS

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INDEPENDENT STUDY COURSES FOR NON-TRADITIONAL STUDENTS

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The Guided Independent Study Program is an individually paced, mastery-oriented teaching method that is being used by the College of St. Scholastica to offer a number of undergraduate and graduate courses to non-traditional students. This paper describes the need for the program, its important features, the procedures that are currently used, characteristics of students enrolled in the various courses, strengths and weaknesses of this mode of delivery, and some directions for future use of this approach.

THE NEED FOR GUIDED INDEPENDENT STUDY

On the basis of national surveys conducted for the Commission on Non-Traditional Study, Carp, Peterson and Roelfs (1974) report barriers to learning as perceived by adult learners. Cross (1981) has classified these obstacles under three headings: situational, institutional and dispositional barriers. Situational barriers are those arising from one's situation in life at a given time. Cost, time, home and/or job responsibilities, child care, and transportation are important obstacles checked by a large proportion of respondents under the situational category. Institutional barriers are those practices and procedures that exclude or discourage working adults from participation in educational activities--inconvenient schedules or locations, full-time fees for part-time study, amount of time required to complete the program, strict attendance requirements, and no information about offerings. Dispositional barriers are those related to attitudes and self perceptions about oneself as a learner. Examples of such barriers include: "Afraid that I am too old to begin", "low grades in the past, not confident of my ability", not enough energy and stamina, tired of school, tired of classrooms, etc. Thus, this study clearly indicates a need for experimenting with alternative modes of delivering instruction for adult learners. The independent study mode that we are using is able to overcome barriers such as: child care, transportation, strict attendance requirements, amount of time required to complete the program, inability to go to school full time, inconvenien

schedules and/or locations, threatening environment, too much red tape in getting enrolled, and paying full time fee for part time study. These barriers were checked by a substantial number of potential learners in the study cited above.

Another important indicator for the need for independent study courses is that of increasing individual differences. Heron and Chown (1967) plotted the distribution of scores obtained on progressive matrices test by different age groups ranging from 20 years to 70 years. Besides the differences in the mean scores the study reported greater differences among the group of older people than among the young. In other words, standard deviations tend to increase with age or aging is the great exaggerator of individual differences. These differences are not only in terms of mental abilities and prior scholastic achievement, but also in terms of learning pace, study habits, test anxiety, independence, achievement motivation and compulsivity (Schaie and Wills, 1979, Snow and Peterson, 1981). Self-paced independent study courses are, therefore, imperative for non-traditional students as they take into consideration the individual variability in terms of speed, study habits and work schedule of adult learners. Since the tests in these courses are self-administered, the students have the flexibility of deciding when to take the test and how much time to spend in answering the questions on the test.

A large number of non-traditional students have home and job responsibilites. Many of them live in distant locations and are therefore unable to travel three or four times a week to a college campus for attending classes. It is also not possible for them to relocate in a community where colleges and universities are available. These are the people who take advantage of courses offered through guided independent study. They are motivated to learn but need some direction and structure so that they can study in the content area of their choice in their own homes.

IMPORTANT FEATURES OF THE PROGRAM

Currently our independent study courses are available in 3 areas: Psychology, Gerontology and Education. Important features of the approach used in designing

these courses are:

1. The content material for the course of study is divided into equivalent sub-divisions called Instructional Projects (I.P.s) of the course. Learners are expected to demonstrate mastery of each I.P. before proceeding to the next. This approach of presenting a relatively smaller amount of material and making a smaller number of task demands at a given point in instruction have been shown to influence learning in late adulthood (Craik, 1968, 1977).
2. For each I.P. the student is provided with the following information: content (a descriptive title), purpose, behavioral objectives, evaluative criteria, learning resources to be used, and competency exercises.
3. The go-at-your own pace feature permits the students to move through the course at a speed commensurate with their individual abilities and other demands upon their time. Thus the time constraints of the traditional quarter or semester system are ignored, allowing learners the opportunity to have somewhat greater control over the logistics of their educational experience.
4. Since learning results from performance and consequences that follow it, students do the competency exercises in each I.P. Some of these exercises can be scored by them right away while others are sent by mail to the instructor who provides them the feedback as early as possible. Phone conversation between the students and the instructor is used both for seeking clarification of written material and for giving feedback. Thus the students maintain continuous contact with the faculty throughout the duration of the course.
5. The instructor prepares a detailed course guide for use by the students. Each course guide begins with an overview of the course, its objectives, scores assigned to each I.P., textbooks, workbooks and other learning resources required for the course, and the recommended sequence for the course materials. Thus the students clearly know what the course expectations are and are given the structure to achieve them.

6. Since the students must be able to retain the knowledge and apply it in new situations, most of the courses have two retention tests: one half-way through the course and the other at the end of the course. Some courses also have special assignments which involve application of material from several I.P.s to do a project. For example, in the course on research methods students are asked to write a critical review of a published study.

Thus the approach we are using is a modified version of Keller Plan as described by Keller (1968). The elements of the Keller Plan missing from our program are that of lectures/demonstrations and use of proctors. As pointed out by Myers (1970) and Hoberock, Koen, Roth and Wagner (1972) social contact between the students and the instructor during class is not a necessary condition for effective learning. Moreover, in a self-paced course it is not possible to arrange a lecture/demonstration to meet the needs of all students. Keller (1965) himself has indicated that lectures given as supplements to his course in introductory psychology were poorly attended. In our situation, since the students are spread over a wide geographical area and are working at their own pace, it has not been possible to arrange lectures/demonstrations. With regard to the use of proctors we feel that the instructors in our courses are able to perform the functions performed by proctors in the Keller Plan. In view of the small number of students involved and the experimental nature of the approach, it is better that the faculty members themselves keep in touch with the students and monitor their progress on a regular basis. This approach allows the instructor to have first hand information on how the program is functioning and what aspects of the I.P.s should be changed and how. If most of the students enrolled in a course are having difficulty with a particular component of an I.P., the instructor discusses the possible changes that may make that I.P. appropriate for those who will take that course at a later date. On the completion of the course, students evaluate the various aspects of the course to provide feedback to the instructor. This information is also utilized in making the necessary

modifications in the course materials and procedures.

SOME CHARACTERISTICS OF STUDENTS ENROLLED IN THE COURSES

Preliminary data on students taking these courses indicate that they are a highly motivated group who are willing to put in a great deal of time and effort to complete the course requirements. As pointed out by Snow (1981), college students with an internal locus of control excel under instructional conditions in which the responsibility for learning, and hence success and failures, is placed on students themselves. It is perhaps this belief in internal control that keeps our students working hard to do the work for the course along with their home and job responsibilities.

Since our approach requires independent study on the part of the students and most of the materials are in written form, it is important that the students be at least average on reading comprehension and be able to write answers to competency exercises. Thus, both reading and writing abilities are important requirements for students interested in taking advantage of this approach. Our experience so far confirms the research findings about adult students that most of these students tend to be above the average on these abilities.

The age of the students currently enrolled in these courses ranges between 25 years and 66 years. The Graduate Record Examination scores of the students taking graduate courses also show a very wide range with the lowest score being 360 and the highest score as 700. Even though most of them are from Minnesota, we do have students from 14 states of the country. Thus the students participating in our program are indeed a heterogenous group of learners with a high degree of motivation for study in their area of interest. The need for individualized instruction for such a group is, therefore, obvious.

STRENGTHS AND WEAKNESSES

The purpose of this section of the paper is to evaluate the independent study approach in terms of its strengths and weaknesses. Like any other instructional

approach, this program cannot solve all of the problems related to teaching. There are circumstances under which it would be neither possible nor desirable to use this approach.

The major strengths of our approach include:

1. It enables us to reach the interested adults who, for one reason or the other, can't attend regular course meetings. Many of these adults are located in rural areas and have full time family and/or job responsibilities.
2. It takes into consideration the increasing individual differences in learning among non-traditional students and allows them the flexibility (a) to work at their own pace, (b) to take the tests when they are ready for them, and (c) to obtain quick feedback with regard to their performance.
3. The mastery learning approach is much less threatening for the adult learners than the conventional approach where a student's grade depends upon where he or she stands in comparison to others enrolled in that course.
4. This approach usually leads to greater number of As and Bs, implying mastery of the course material by most of the students completing the course. Evidence is also available regarding the superiority of this type of approach over conventional instruction on follow-up tests administered several weeks after the completion of the course (Kulik, Kulik, and Cohen, 1979).
5. Because independent study approach gives students the time and instruction they individually need, it usually produces high level of achievement by all, not just a few. Meta-analysis of outcome studies of Keller Plan courses conducted by Kulik et al. (1979) confirms that independent study is as effective with high aptitude students as with low aptitude students.

The weaknesses of this approach are:

1. In view of the individualized nature of the program, the instructor maintains contact with each student enrolled in the courses. This means that the number of students taking a course at a given point in time should not be more than

ten. This approach would, therefore, not be appropriate if the enrollment in the course is likely to be very high.

2. This approach is more appropriate for courses where mastery of the material is the main course objective. It is not appropriate for courses whose object is to provide an experience, not to master a subject matter. The independent study mode would, therefore, not be recommended for courses such as group dynamics, stress management, and student teaching.
3. As is obvious from the discussion so far, this approach involves hard work both on the part of the instructor and on the part of the students. The instructor has to specify detailed objectives for the course, divide the course material into small units, develop competency exercises, and provide feedback to the students on regular basis. The students have to demonstrate mastery of the material on the first I.P. before they go to the second and then take retention tests at two different points in time. If one contrasts this with the rather limited amount of test feedback in a conventional course, the difference in the two approaches becomes obvious.

DIRECTIONS FOR FUTURE USE OF INDEPENDENT STUDY

In view of the continuous increase in the number of persons in the middle years and rapid social and technological changes, increased attention will have to be given to lifelong learning. As indicated earlier, in order to meet the needs of adult learners alternative methods of delivering instruction will have to be explored. The independent study approach presented in this paper is one of these alternatives. It can be used to provide courses where the material to be learned is structured in a definite hierarchy with well defined objectives, is largely available from written materials, and is amenable to individual, rather than group learning. For courses where experiential learning rather than mastery learning is the goal, this approach will have to be adapted so that students participate in both independent study and experiential learning to achieve both types of objectives.

Independent study mode can also be used in conjunction with materials presented through television, video cassettes, audio cassettes and newspapers by incorporating the self pacing and unit perfection features in these modes of delivery.

On the basis of review of recent research on Aptitude Treatment Interactions (ATI) Snow and Peterson (1981) have argued the need for using a variety of aptitude variables in determining what constitutes an appropriate instructional strategy for a potential learner. Future research on design of different modes of instruction should incorporate the findings of ATI research. As research and development on ATI proceeds, it can be expected that in the future both instructors and the students would be able to turn the results of this research to their advantage.

In summary, the independent study approach is one possible way to meet the educational needs of growing numbers of adult learners. Its features of self pacing, mastery learning and immediate feedback make it especially attractive to non-traditional students who are unable to attend conventional on-campus classes.

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